

ABSTRACT

An instruction decoder 14 identifies, for each instruction, an operational block involved in the execution of the instruction and an associated heat release coefficient. The instruction decoder stores identified information in a heat release coefficient profile 20. An instruction scheduler 16 schedules the instructions in accordance with the dependence of the instructions on data. A heat release frequency adder 32 cumulatively adds the heat release coefficient to the heat release frequency of the operational block held in the operational block heat release frequency register 22 as the execution of the scheduled instructions proceeds. A heat release frequency subtractor 34 subtracts from the heat release frequency of the operational blocks in the operational block heat release frequency register 22 in accordance with heat discharge that occurs with time. A hot spot detector 36 detects an operational block with its heat release frequency, held in the operational block heat release frequency register 22, exceeding a predetermined threshold value as a hot spot. The instruction scheduler 16 delays the execution of the instruction involving for its execution the operational block identified as a hot spot.